

SUMMARIES									
result	No.	Score	Query	Match	Length	DB	ID	Description	
1	3062.4	99.7	AAQ37493	3072	14	AAQ37493		Human TPO gene.	H
2	3004.4	97.8	AAQ53061	3048	14	AAQ53061		Human thyroid pero	
3	3003.4	97.8	AAQ90104	3050	16	AAQ90104		Human thyroid pero	
4	2998.4	97.6	AAQ40728	3045	14	AAQ40728		Thyroid peroxidase	
5	2801.4	91.4	AAV32403	2847	19	AAV32403		Human thyroid pero	
6	2511.4	81.8	AAX37301	2546	20	AAX37301		HindIII/HpaII frag	
7	469.8	15.3	AAQ03118	2260	11	AAQ03118		Myeloperoxidase co	
8	469.8	15.3	AAT66437	3215	18	AAT66437		Nucleotide sequenc	
9	464.2	15.1	AAZ45456	2272	21	AAZ45456		Human adenosine re	
10	438.2	14.3	AA34880	2558	21	AA34880		Human adenosine re	
11	438.2	14.3	AAV1509	2558	21	AAV1509		Human adenosine re	
12	438.2	14.3	AAF21441	6103	21	AAF21441		Human eosinophil p	
13	417	13.6	AAZ51671	5510	21	AAZ51671		Human P53 target m	
14	417	13.6	AAV9922	6847	20	AAV9922		Melanoma associate	
15	386	12.6	AAQ11842	2710	12	AAQ11842		Bovine lactoperox	
16	367.8	12.0	AAV11507	1386	19	AAV11507		Recombinant MPO DN	
17	347.8	11.3	AAF21436	35384	21	AAF21436		Human enzyme relat	
18	314.4	10.2	AAV72575	316	20	AAV72575		Thyroid peroxidase	
19	298.8	9.7	AAAC9446	2637	21	AAAC9446		Human secreted pro	
20	298.8	9.7	AAD08330	2736	22	AAD08330		Human secreted pro	
21	289.4	9.4	AAQ11843	1399	12	AAQ11843		Human lactoperox	
22	289.4	9.4	AAV11509	702	19	AAV11509		Recombinant MPO DN	
23	190.6	6.2	AAV1514	615	19	AAV1514		Recombinant MPO DN	
24	183.6	6.0	AAV1508	699	19	AAV1508		Recombinant MPO DN	
25	165.8	5.4	AAV72575	169	20	AAV72575		Thyroid peroxidase	
26	146.2	4.8	AAV15115	417	19	AAV15115		Recombinant MPO DN	
27	134.8	4.4	AAV1512	444	19	AAV1512		Recombinant MPO DN	
28	116.4	3.8	AAV1512	387	19	AAV1512		Recombinant MPO DN	
29	111.3	3.6	AAV1516	324	19	AAV1516		Human adenosinphil p	
30	74.8	2.4	AAV15150	393	19	AAV15150		Recombinant MPO DN	
31	73	2.4	AAI25101	257	22	AAI25101		Human eosinophil p	
32	73	2.4	AAI50972	22	22	AAI50972		Probe #1034 for g	
33	72.4	2.4	AA00696	5494	21	AA00696		Human mitogenetic re	
34	71.8	2.3	AAF20919	325	21	AAF20919		Human eosinophil p	
35	71.8	2.3	AA34797	325	21	AA34797		Human adenosinphil p	
36	70.6	2.3	AAV1521	237	19	AAV1521		Recombinant MPO DN	
37	70	2.3	AAF20922	437	21	AAF20922		Human eosinophil p	
38	70	2.3	AA34800	437	21	AA34800		Human adenosinphil p	
39	68.6	2.2	AAV1517	150	19	AAV1517		Recombinant MPO DN	
40	68.2	2.2	AAI24688	389	22	AAI24688		Probe #14621 for g	
41	68.2	2.2	AAI5019	389	22	AAI5019		Probe #18705 used	
42	68.2	2.2	AAI15459	473	22	AAI15459		Probe #5392 for ge	
43	68.2	2.2	AAI56820	473	22	AAI56820		Probe #5306 used t	
44	68.2	2.2	AAF21418	482	21	AAF21418		Human eosinophil p	
45	68.2	2.2	AAA34796	482	21	AAA34796		Human adenosinre	

The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'universal' or alternative base, (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytotactic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and/or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system receptors, CNS and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF21543 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of the present invention.

Sequence 6103 BP; 1218 A; 1863 C; 1737 G; 1287 T; 8 other:

QY	2150	actccctgtctcggtatctgtgacaaactggctcaccagggtcccccattggatgcct	2209
Ddb	5512	tttcctgtctcgaaatataatgtgacaaatccgggratcaccacggatcaggacatct	5571
QY	2210	tccaaatcgccggaaatcccgaaagactttggatcttggatcactggatcatggacaa	2269
Ddb	5572	tcagggccaaatctacccttgggttttggatcactggatccaggttggatcacc	5631
QY	2270	tggaggccgtggggggaaacct	2290
Ddb	5632	tatcaccccttgcqaaqgacat	5652

RESULT 13
AAZ51671 AAZ51671 standard: cDNA: 5510 BP.

AAC	AA251671;
XX	
DT	21-JUN-2000 (first entry)
XXX	
DE	Human p53 target molecule, PRG2 cDNA.
DE	PRG2: p53 target; human; modulates; cell proliferation; immunomodulatory; chromosome 2p24.3; cytostatic; gene therapy; tumour cell; inducer; diagnosis; therapeutic; proliferative disease; cell cycle arrest; cancer; treatment; apoptosis; knockout animal; cancer susceptibility; dpxn; hpxn; pexoxidase; redox-regulation; reactive oxygen species; ROS; ss.
XX	

OS	Homo sapiens.	
XXX		
Key	Location/Qualifiers	
CDS	1..4491	a
FT	/*tag=	
FT	/product=	"Human PRG2 Protein"
FT	/note=	"Human homologue (hPxn) of Drosophila peroxidasin gene, dPxn"
FT	/partial=	
FT	1..87	
FT	/*tag=	b
FT	88..4488	
FT	/*tag=	c
FT	/product=	"Mature human PRG2 protein"
FT	/note=	"Exhibit growth inhibitory effect upon over

27-AUG-1999; 99M0-US19551 .
XX US M&M 2000.

28-AUG-1998; 98US-0098251.

PA (UPPR-) UNIV PRINCETON.
PA XXX
PI Horikoshi N Shenyu.

WPI: 2000-246724/21.
P-PSDB; AAY70469.
XX New p53-inducible isolated nucleic acid molecule including open reading frame, encoding human homolog of *Drosophila melanogaster* peroxidasin, PR

XX Disclosure; Page 68-69; 83PP; English.
XX PPS CCC
XX The present sequence is the complete cDNA of PRG2 gene, whose RNA levels
are upregulated in response to induction of p53 activity in human colon
cancer EB1 cells. This sequence is the human homologue (hpxn) of
Drosophila peroxidasin gene dpxn, that is expressed in heart, placenta,
spleen, ovary and intestines. PRG2 is involved in p53-mediated growth
suppression pathways and plays a role in redox regulation. It is a

heme-peroxidase that increases the intracellular content of reactive oxygen species (ROS). They are potential targets of p53 regulatory activity and are useful for modulation of cellular proliferation. PRG2 gene is localised to human chromosome 2p4.3. The PRG target molecules have cytostatic and immunomodulatory activity. PRG polynucleotides, proteins and antibodies are useful as diagnostic and therapeutic agents for detection and treatment of cancer and other proliferative diseases. The gene/cDNA may be used for gene therapy, to restore a gene function downstream of p53, that cannot be activated in the p53-deficient tumour cell. Antibodies can be used as inducers of cell cycle arrest and/or apoptosis. The DNA sequences can be used to generate 'knockout' animals as a model of cancer susceptibility.

Sequence 5510 BP: 1258 A: 1638 C: 1522 G: 1087 T: 0 Other:

Db 2944 --gagcccaatccctgttctggccgggacaccgcggccacagcggccac 3000
 Qy 1291 ctgacggactgcaacgcgtgtggcgccggacaacaccgcgtggccggccaa 1350
 Db 3001 ctgaccaatgcacacgcgtgtggccggacaaacccgcgtggccggcc 3060
 Qy 1351 gcctcaatgcactcgccgggggggggggggggggggggggggggggggg 1410
 Db 3061 aagtctgcaaccggactggggatcatcccaaggatccctggggaccggcc 3120
 Qy 1411 gctctgcaaccatcatccatccatccatccatccatccatccatccatcc 1470
 Db 3121 gggatccggatccggatccatccatccatccatccatccatccatccatcc 3180
 Qy 1471 ttccatcgatgtgggtccatataaaggctatgactccacccggccaaacc 1530
 Db 3181 at--gaggacgtggggagatggggatccggccatgtggcatatcc 3237
 Qy 1531 aacgtgttctccaaacgcgcgttcggatccatggcatccacatgggggggg 1590
 Db 3238 aacgccttcggccacccggccgttcggatccatggcatccacatgggggg 3297
 Qy 1591 aacctgtggccatgggggggggggggggggggggggggggggggggggggg 1650
 Db 3298 cggctggatggatctcc--agccattgtgecaaaatcatccccccttccaa 3354
 Qy 1651 ttcttcggccatggggatattactccggccgttcggatccatgggggggggg 1710
 Db 3355 ttcttcgttcctccggatgtggatggggggggatccatgggggggggggg 3414
 Qy 1711 ctggcaagaccggaaactcgccggggatccatggatggggatgggggggg 1770
 Db 3415 ttccgggttggggggaaaatcggtggccctcgatgtggatccatgggggg 3474
 Qy 1771 aacctttttgtgtgtccaaatccacgtgggggggggggggggggggggg 1830
 Db 3475 cggctgttcctccatggccacacgggggggggggggggggggggggggg 3534
 Qy 1831 ggccggggaccgggggggggggggggggggggggggggggggggggggg 1890
 Db 3535 ggccggggaccgggggggggggggggggggggggggggggggggggggg 3594
 Qy 1891 ctggagaccggccgtggatggatggatggatggatggatggatggatgg 1950
 Db 3595 gcaacacgttgggggggggggggggggggggggggggggggggggggg 3654
 Qy 1951 ctggacttgttcaagatcaatccatgtgggggggggggggggggggggg 2010
 Db 3655 aaaagggtgtatggatggatggatggatggatggatggatggatggatgg 3714
 Qy 2011 ttcttcggccatgggggggggggggggggggggggggggggggggggggg 2070
 Db 3715 ctggactgtggccatgggggggggggggggggggggggggggggggggg 3774
 Qy 2071 gctctgg 2130
 Db 3775 ctggatggatggatggatggatggatggatggatggatggatggatggatgg 3834
 Qy 2131 aggctgtggatgg 2187
 Db 3835 ctgactcgatcaatggatggatggatggatggatggatggatggatggatgg 3894
 Qy 2188 accagggtggccatgtggatggatggatggatggatggatggatggatggatgg 2247
 Db 3895 accgggtggccatgtggatggatggatggatggatggatggatggatggatgg 3954
 Qy 2248 gacggatcatcgatcgatcgatcgatcgatcgatcgatcgatcgatcgatcg 2292
 Db 3955 gacgatcccaatgg 3999

Query Match 13 6%; Score 417; DB 20; Length 6847;
 Best Local Similarity 54.9%; Pred. No. 1.8e-81;

AAV99922
 ID AAV99922 standard; cDNA: 6847 BP.
 XX
 AC AAV99922;
 XX
 DT 10-MAY-1999 (first entry)
 XX
 DE Melanoma associated antigen MG50 gene.
 XX
 KW MG50; melanoma gene-50; melanoma associated antigen; human;
 T cell epitope; cancer; lung cancer; rhabdomyosarcoma; diagnosis;
 KW therapy; vaccine; ds.
 XX
 OS Homo sapiens.
 XX
 Location/Qualifiers
 FH Key
 CDS 1..4491
 FT /*tag= a
 FT polyA_signal 6805..6810
 FT /*tag= b
 XX
 PN WO955133-A1.
 PR 04-JUN-1997;
 XX
 PD 10-DEC-1998.
 XX
 PR 04-JUN-1998;
 XX
 PR 98WO-US11533.
 XX
 PR 06-JUN-1997;
 XX
 PD 10-DEC-1998.
 XX
 PR 04-JUN-1998;
 XX
 PR 97US-0870941.
 XX
 PA (REGC) UNIV CALIFORNIA.
 PA (UYSIC) UNIV SOUTHERN CALIFORNIA.
 XX
 PI Deans RJ, Kan-Mitchell J, Minev BR, Mitchell MS;
 XX
 PR 06-JUN-1997;
 XX
 DR P-PSDB; AAW81030.
 XX
 PT New MG50 melanoma associated antigen fragments - used to develop
 PT products for the detection, treatment, and prevention of
 PT MG50-expressing cancers, e.g. melanoma, lung cancer or
 PT rhabdomyosarcoma
 XX
 PS Claim 8; Page 38-45; 79pp; English.
 XX
 CC This is the nucleotide sequence of cDNA encoding a portion (see
 CC AAW81030) of the new human melanoma associated antigen MG50.
 CC Subtractive hybridisation of cDNA obtained from melanoma cell line
 CC MSM M-1 against an excess of mRNA from squamous lung carcinoma cell
 CC line Lu-1 was used to clone cDNA sequences differentially expressed
 CC in MSM M-1 cells. 12 candidate clones were obtained, 6 of which
 CC were considered novel. 1 clone, designated melanoma gene-50
 CC (MG50), was selected for further characterisation. The 5' region
 CC of the gene has yet to be obtained.
 CC MG50 mRNA was detected in melanoma, lung carcinoma and rhabdomyosarcoma cells, foetal brain,
 CC foetal heart and human placenta. The invention also provides
 CC cell epitopes (see AAW81031-54) from MG50, including cytotoxic and
 CC helper T cell epitopes, recombinant vectors, and antigen MG50
 CC or an MG50 T cell epitope, presenting cells. Methods are provided for identifying an MG50
 CC melanoma associated antigen in an individual and for identifying an
 CC immune response against an MG50 melanoma associated antigen, as
 CC well as methods of stimulating T lymphocytes that are reactive
 CC against cancer cells expressing MG50, and for treating an individual
 CC having cancer cells that express MG50. The products and methods
 CC can be used for the detection, treatment and prevention of
 CC MG50-expressing cancers, e.g. melanomas, lung cancer or
 CC rhabdomyosarcoma.
 XX
 SQ Sequence 6847 BP; 1614 A; 1914 C; 1856 G; 1451 T; 12 other;

Search completed: November 26, 2001, 09:21:54
Job time: 344 sec